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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/679,455	10/04/2000	Arihiro Takeda	2803.64682	7544

7590 03/13/2003

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EXAMINER

NGUYEN, DUNG T

ART UNIT PAPER NUMBER

2871

DATE MAILED: 03/13/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/679,455

Applicant(s)

TAKEDA ET AL.

Examiner

Dung Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 December 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 149, 150, 152-163 and 165-187 is/are pending in the application.
- 4a) Of the above claim(s) 157, 158, 173, 174 and 180-187 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 149, 150, 152-156, 159-163, 165-172 and 175-179 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 09/097,027.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/17/2002 has been entered.
2. Applicants' amendment filed 12/17/2002 has been received and entered.
3. Applicant's arguments filed 12/17/2002 have been considered but are moot in view of the new ground(s) of rejection as follow:

Drawings

4. The drawings are objected to under 37 CFR 1.83(a) as stated in the previous office action.

Applicants contend that figure 182 shows the color filter (CF) substrate having first protrusion, figure 182 does not show second protrusion define a gap between the CF substrate and a TFT substrate (amendment, page 2). Applicants also contend that figure 184A-184B show the second protrusion as claimed (amendment, page 3). However, figure 182 is a diagram showing structure of a liquid crystal display (LCD) panel of the 47th embodiment and figure 184A-184B are diagrams showing structure of an LCD panel of the 48th embodiment. Therefore, there is no pictorial showing a CF substrate (of an LCD panel) having both first protrusion and

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second protrusion as set forth in claims 149, 152, 163 and 165. It should be noted that the drawings must show every feature of the invention specified in the claims.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Objections

5. Claim 149 is objected to because of the following informalities:
- the abbreviated term "TFT" needs to be defined before any abbreviation is introduced
- line 7, "counter" should be corrected as --TFT--.
- Appropriate correction is required.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
7. Claims 149-150, 152-156, 159-163, 165-172 and 175-179 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kurauchi et al., US Patent No. 5,917,572, in view of Hirata et al., US Patent No. 5,953,093.

Regarding the above claims, Kurauchi et al. disclose a liquid crystal display (LCD) device (figure 23) comprising:

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- . a TFT substrate (161);
- . a color substrate (211);
- . a liquid crystal layer (40) therebetween;
- . a color filter (213R/G/B) providing inside display areas of pixels;
- . an electrode (215) forming on the color filter;
- . a second protrusion (214) forming by a color filter (e.g., stacking three different kinds of color filters R/G/B) as a spacer for defining a gap of the LCD cell, wherein the second protrusion provides outside the display areas and forms light shielding areas (figure 23).

The difference between Kurauchi et al. and the claimed invention is a first protrusion being formed on the electrode and included dielectric material for regulating azimuths of orientations of the liquid crystal layer. Hirata et al. do disclose insulating protrusions (32d) can be formed on an electrode (32c) for regulating azimuths of orientations a liquid crystal layer (33) (see figure 16, col. 12, lines 44-65). Therefore, it would have been obvious to one skilled in the art at the time of the invention was made to modify the Kurauchi et al. device having a first protrusions formed on an electrode as shown by Hirata et al. in order to improve viewing angle dependence in an LCD device (see col. 12, ln. 22).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dung Nguyen whose telephone number is 703-305-0423. The examiner can normally be reached on Monday-Thursday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H. Kim can be reached on 703-305-3492. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7726 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

DN
03/06/2003



Dung Nguyen
Patent Examiner
GAU 2871